

## REMARKS / ARGUMENTS

### **Requirement of Information under 37 CFR § 1.105**

In the Office Action, the Examiner stated that information contained in paragraph [0012] regarding what is known in the art is reasonably necessary to the examination of the application. In particular, the Examiner issued a requirement for information regarding the following statement: "In a known way, this histogram 6 comprises a bordering part 8, representing the edge of the breast at its end and, typically, two peaks corresponding to an adipose zone ZA and a glandular zone ZG."

In response to this requirement, the Applicants were asked to provide information regarding the availability of this statement to the public before November 27, 2002. In response, Applicants stated to Applicants Attorney that the language cited by the Examiner referred to information included in French Patent Application 9814786 to Lienard et al. that was published on May 26, 2000. A copy of French Patent Application 9814786 is included with this response. French Patent Application 9814786 corresponds to United States Patent 6,633,661B2 to Lienard et al. which issued on October 14, 2003 (the '661 Patent). Applicant notes that European Patent Application EP1004985, that is of record in the present application and has been cited by the Examiner, claims priority to French Patent Application 9814786.

Both the '661 patent, EP1004985 and their French parent application 9814786 include a Figure 8 that illustrates a histogram of the thickness of a breast. While not discussed specifically in the specification of the patent, Figure 8 illustrates a histogram having two peaks on the right side of the histogram. The first peak is labeled "adipose tissue" and the second peak is labeled "glandular tissue." Figure 8 further includes two labels for regions of the histogram. The first region is labeled "edge of breast" and the second is labeled "body of breast." The two peaks representing the adipose and glandular tissue are located in the region labeled "body of breast."

Applicant respectfully submits that French Patent Publication 2786293 was published and made available to the public prior to the November 27, 2002 date. Further, Applicant respectfully submits that the submission of the French Patent Application 9814786 fulfills the requirement for information under 37 CFR § 1.105.

### **Status of Claims**

In the Office Action, the Examiner noted that Claims 1-21 and 23-25 are pending in the application. By this Amendment, Claim 1 has been amended, leaving Claims 1-21 and 23-25 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. § 103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

### **Rejections Under 35 U.S.C. §103(a)**

Claims 1-15 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nicolas et al. (European Patent Application EP 1 113 392, hereinafter "Nicolas") in view of Neitzel et al. (U.S. Patent No. 5,550,888, hereinafter "Neitzel"), Langan et al. (WO 01/69532, hereinafter "Langan") and Abdel-Mottaleb (U.S. Patent 5,768,406, hereinafter "Abdel-Mottaleb").

Claims 16-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neitzel, Langan and Abdel-Mottaleb as applied to Claim 1 above, and further in view of J. Kaufhold et al. "A Calibration Approach to Glandular Tissue Composition Estimation in Digital Mammography", (hereinafter "Kaufhold").

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolas, Neitzel, Langan and Abdel-Mottaleb as applied to Claim 22 above, and further in view of Gonzalez et al., "Digital Image Processing," Prentice-Hall, Inc., page 85.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolas, Neitzel, Langan, Abdel-Mottaleb and Gonzalez as applied to Claim 23 in further view of Lienard et al. (European Patent Number 1004985 hereinafter "Lienard").

Claim 25 is is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolas, Neitzel, Langan, Abdel-Mottaleb, Gonzalez and Lienard in further view of Kaufhold

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection for the Claims as amended would be improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

#### Regarding Independent Claim 1

Independent Claim 1 has been amended to incorporate the limitation that the compressing of the dynamic range of the image with reduced dynamic range and heightened contrast is performed "with a third table to produce one image signal per pixel, wherein the size of said image signal corresponds to" the small dynamic range of the imaging device. Antecedent basis for this amendment may be found in paragraph [0016] of the present application

Applicant respectfully asserts that Independent Claim 1, as amended is not obvious in light of the combination of Nicolas, Neitzel, Langan and Abdel-Mottaleb.

Furthermore, Applicant finds Neitzel to teach "The invention enables the user to preset the contrast and the density of the visible image in conformity with his

requirements and independently from one another.” [Neitzel, Abstract] and Langan to teach “A method and apparatus ... for performing a contrast-based dynamic range management (C-DRM) algorithm” [Langan, Abstract], and submits that neither Neitzel nor Langan teach the claimed ... *third table to produce one image signal per pixel, wherein the size of said image signal corresponds to dynamic range of an imaging device with a small dynamic range.*

Applicant further finds that Langan teaches third look-up table that clips the output out a look-up table to ensure an 8-bit result. [Langan, Page 18, Lines 23-25]. Therefore, Applicant respectfully submits that when a result is “clipped” the data is “cut, or cut off or out, as with shears” [clip. (n.d.). *Dictionary.com Unabridged (v 1.1)*. Retrieved October 29, 2007, from Dictionary.com website]. Applicant respectfully submits that to truncate or cut data from the signal is not the same as and is substantially different from the claimed “converting the dynamic range of the image with reduced dynamic range and heightened contrast by compressing the image with a third table to produce one image signal per pixel.” The claimed conversion allows the display of an image encoded at one size (e.g. 12-bits) on a imaging device with a small dynamic range (e.g. 8-bits) while keeping the possibility.

Langan does not disclose, teach, or suggest the claimed image ... originally having a wide dynamic range to be displayed with heightened contrast on an imaging device having a smaller dynamic range while keeping the representation of the larger encoded image. (Present application, Paragraph [0033]). Applicant submits that clipping or cutting of extraneous image data to 8 bits precludes the possibility of displaying of an eight-bit representation of the image encoded on 12 bits. Accordingly, Applicant submits that Langan does not disclose, teach or suggest the claimed conversion required in independent Claim 1 and for at least this reason, the combination of Nicolas, Neitzel, Langan, and Abdel-Mottaleb fail to teach each and every element of the claimed invention arranged in such a manner to perform as the claimed invention performs.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention arranged to perform as the claimed invention performs and are therefore wholly inadequate in their teaching of the claimed invention as a whole, and disclose a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

Claims 2-21 and 23-25 depend either directly or indirectly from Independent Claim 1 and therefore also incorporate all of the limitations of independent Claim 1 and include additional limitations not found in the prior art. For at least the reasons stated above with respect to independent Claim 1, Applicant respectfully submits that Examiner's rejection under 35 U.S.C. §103(a) has been traversed. In view of the foregoing, Applicant submits that the cited references fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do with the patent Applicant has done, fail to offer any reasonable expectation of success in combining the reference to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal the rejection under 35 U.S.C. §103(a) and allowance of Claims 2-21 and 23-25 is respectfully requested.


For the reasons advanced above, Applicant respectfully submits that the application is in condition for allowance and that action is earnestly solicited.

If there are any additional charges with respect to this Reply or otherwise, please charge them to Deposit Account No. 50-2513 maintained by Applicants' Attorney's.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account 50-2513.

Respectfully submitted,

CANTOR COLBURN LLP  
Applicant's Attorneys

By:  \_\_\_\_\_

Dave S. Christensen  
Registration No: 40,955  
Customer No. 23413

Date: November 5, 2007  
Address: 55 Griffin Road South, Bloomfield, Connecticut 06002  
Telephone: (860) 286-2929  
Fax: (860) 286-0115